

UNDER DEVELOPMENT

Crate expectations

Jet-setting David Robinson comes up with a system to keep track of thousands of crates in transit, but his airline can't come up with a system to keep track of his luggage

After an hour and a half spent in splendid isolation on the motorway (see *Under Development*, *Shopper* April 2006), I was standing in a queue for the ticket desk at Manchester Airport wondering where all these people had come from. I was with about 300 other hopefuls needing to get re-routed to Philadelphia. After an hour, they'd dealt with less than half the folks in front of me; this was going to take forever.

A uniformed woman appeared and started talking to the people in front of me, then eventually got to me. Would I consider going on the next day's flight? They'd put me in a four-star hotel and pay for meals. So far she'd had no takers. If I said yes, I'd get a business class ticket. As the next day was a public holiday in the US and I was planning on using the time to write last month's article, it was a no-brainer. Yes, please!

The Radisson hotel had a WiFi link, so I could deal with my email and catch up on all my computer housekeeping; I could update my CASL PDA programming language to the latest version, browse the user newsgroup to see what goodies they had added and do the stuff I said I'd do over Christmas but never got round to. I also ran six miles in the gym, so rectifying another Christmas lapse.

The flight was uneventful, and the film was crap, so I whipped out my JVC notebook and knocked up a training log program using CASL 4.2 to run on my Palm Zire 72. It does speed and distance calculations in both mph and kph, and can convert between the two. CASL is perfect for writing this kind of program and is free for non-commercial users. Programs can run on Palm, Pocket PC and ordinary Windows, too. You can get a copy at www.cassoft.com.

PICKUP PICKED OFF

When I finally arrived, I found that US Airways had lost one of my bags, and my favourite nuclear yellow Ford F250 pickup that I always drive was no more. A tree fell on it during hurricane Katrina; the replacement was a boring white one.

What was the purpose of all this jet-setting? Most of the motivation



came from customer's customers – what we call a cust2mer for short. The cust2mers have been particularly active of late. Our software package that manages moving things about and tracks where they're stored – Logistix – was designed to be flexible, but it never ceases to amaze me just how many new requirements people manage to think up.

One of the current problems relates to raw materials arriving in bulk by ship. The stuff comes in crates and each one has a barcode, which in effect is a unique serial number. The crates vary in size and content but, apart from size differences, look pretty much the same. But if they know how to read the barcode, what's the problem?

Well, an increasing number of barcodes have been getting damaged in transit. The trouble comes from two similar sources:

- Goods sitting in the hold of the ship rubbing together during transit
- Similar, more stressful movement during the process of craning the stuff in and out of the ship.

It wouldn't be so bad if you were dealing with, say, 20 or 30 crates; at volumes like that you can cope with 20 per cent having to be identified and relabelled. But we're not dealing with 20 at a time. Each shipment contains around 3,000 crates, and there can be one or two shipments per week. The design of the crate doesn't lend itself to solving the problem by simply relocating the labels, and they already stick two labels on to try to increase the

chances of at least one not being damaged. The crates do, however, have the serial number stencilled on; it's not machine readable, but it gives us something to work with.

NUMBER'S UP

The staff have been working round the problem by noting down the serial numbers of the crates with damaged labels and manually entering them into the system. Under ideal conditions, this happens automatically when the intelligent barcode scanners upload the details of what was scanned on receipt, then an email copy of the receipts list is sent to the owners of the goods. But manually sorting out up to 1,200 entries a week takes a lot of time and effort. It's also difficult to note down the numbers, because ships get unloaded round the clock and often the work has to be done in the dark.

I spent a couple of days knocking up a prototype solution that works like this. The PDA asks Logistix on the server for a list of the numbers of the crates in the shipment. It sorts them into order to make individual numbers easy to locate. I've also mixed in an intelligent partial find/search feature. Now all they have to do is locate a serial number in the list and tick it off as being received. There's an 'untick' facility for items that got ticked by mistake and also a way of recording any damage on receipt so my customer doesn't get blamed and lumbered with any costs. The PDA backlit display also gets around

the writing-in-the-dark problem. When they've finished receiving goods into store, they just have to get within range of the corporate wireless network and send the ticked list back to the Logistix program, which will reconcile what was received against what should have been, update the stock status and real-time website, and prepare all the necessary paperwork.

My prototype was greeted with enthusiasm, especially by Fathead, one of the main guys who will use it. He's called Mike, is 5' 8" and weighs over 20 stone. The nickname is unkind and I call him Mike, but he does have a very fat head. I've cunningly designed the screen with big buttons so the operator can work the PDA and tick off items received using fingers instead of a stylus, which would be easy to lose, especially on a dockside at night. However, looking at Fathead's sausage-like fingers I think we might need even bigger buttons and a two-foot PDA – anybody know where I can get one of those?

FOG OFF

The return flight looked simple enough: Baton Rouge to Philadelphia, wait an hour, then Philadelphia to Manchester. That's the theory. The reality is that Philadelphia is foggy and the plane can't get there in time to make the connection. Do I want to go tomorrow? Haven't I heard that somewhere before? No, thank you. The alternative is fly to Charlotte, North Carolina, then to Frankfurt, then to Manchester. The Charlotte plane leaves in two minutes, so it's decide now or wait ages. I opt to go. The Frankfurt legs involve flying over my house – twice. And when I do finally arrive in Manchester, I find that the airline has improved its score over the outward journey. I stand forlornly at the baggage carousel and watch as everyone else gets their bags. This time, I get nothing at all. **CS**

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